THE EARLY SURVEYORS AND SURVEYING IN ILLINOIS.

BY Z. A. ENOS.

BEFORE THE ILLINOIS SOCIETY OF ENGINEERS,
JANUARY 29, 1891.

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THE EARLY SURVEYORS AND SURVEYING IN ILLINOIS.

Mr. President:

In response to this toast I will confine my remarks to only a few of the important and interesting events, and the persons connected with surveying, prior to the year 1860.

The early county and private Surveyors of Illinois were not governed by any fixed rules in making surveys. Usually, if called upon to make a survey (for instance) of a half-quarter section, they would commence at the government section or quarter section corner of the eighty and run around north or south and east or west, (according as the tract was located,) 40 by 20 chains, and establish the corners. This was generally satisfactory to all parties concerned, for land was of little value, money scarce, and the saving of expense a great object. If the owner of the land was certain he was on the right tract and in a rod or so of the lines, that was sufficient. But if greater accuracy was demanded, the surveyor would run the two outside lines of the quarter section and make the other two sides of the tract correspond in bearing, and proportionally in distance. But in time, as the state became more thickly settled and lands more valuable, the practice of fixing the center of a section and subdividing equally from it, became more general. Yet this center was made indifferently by the equal division of a straight line through the section from the quarter corners on the north and south or those on the east and west. In 1850 the Surveyor General for Illinois and Missouri published his "Manual of Instructions to U. S. Deputy Surveyors," with an appendix for the use of County Surveyors. This was immediately recognized, without any question, as being conclusive authority, and generally adopted by the better class of survey-

ors in the state; until Judge Burt's "Key to the Solar Compass" was introduced, which opened up the whole subject of the proper survey and subdivision of the sections and led to much discussion, both oral and written, finally resulting in the following call for a Surveyors' Convention:

SPRINGFIELD, DEC. 18th, 1856.

SIR—The undersigned, Surveyors, in view of the diversity of opinion and practice among the Surveyors in the different Counties of the State as to the proper of division of interior and fractional Sections, and the restoration of lost or destroyed Section and Quarter-section Corners, and deeming it expedient that an uniform practice should be adopted for such surveys, and also that there should be a revision of the tariff of fees, which being adopted at early day, when surveying was not attended with the same difficulties as now, is therefore inapplicable at the present time, we would suggest that while the law is indefinite in many cases, the fees in others are inadequate to the amount of labor to be performed; that while it requires the surveyed to be recorded, it provides no renumeration; that while it requires us to furnish plats and certificates, when called on, it makes no provision for our being paid for our trouble; and that while it requires us to survey County Roads, and furnish plats of them, the remuneration which it allows is altogether inadequate.

Believing that these objects can be best be obtained, and these defects be best remedied, by consultation and agreement of the Surveyors, we would therefore suggest the propriety of MEETING IN CONVENTION at Springfield, on the 7th day of JANUARY, 1857, for the purpose of discussing these and such other matters as may come before the Convention, in order to bring the subject before the Legislature at as early a day as possible.

We would therefore request that, if the above suggestions meet with your approbation, you will attend on the occasion, if practicable; and, if unable to attend, you will please communicate your views on such matters connected with the profession as you may think appropriate to come before the Convention.

Respectfully yours,

Z. A. ENOS, JOSEPH LEDLIE, CORTES FESSENDEN, J. WARD, H. A. ULFERS,	Sangamon Co.
ALEX. WOLCOTT, CHAS. HERRIKIND,	Cook County.
THOS. KING, JR., H. N. ESTABROOK, J. A. NASON,	Tazewell Co.
J. B. R. SHERRICK, A. T. RISLEY,	Macon County.
PETER FOLSOM,	McLean County.
F. H. CHAPMAN,	Macoupin Co.

N. B....Please forward all communications to the County Surveyor's Office, Springfield.

The surveyors generally throughout the state responded to this call, either in person or by communication, and in pursuance thereof the convention met, organized and entered upon the consideration of the several subjects embraced in the call, with such others as were presented in the communications, or by the members present, covering, in all, most of the mooted questions that have since occupied the time and deliberations of the permanent organizations in all the states. But nothing final or definite was determined at this meeting as to the correct manner of subdividing the sections or restoring the lost corners. The most generally expressed opinion seemed to favor conforming to the instructions given to County Surveyors by the Surveyor General for Illinois and Missouri, in his "Manual of Instructions." The convention, however, agreed upon a bill to amend the law relating to County Surveyors and their fees, which was intoduced in the legislature then in session, but it failed to become a law. Not discouraged by this failure to get the legislative aid desired, and stimulated by the good effect to the profession resulting from the first convention, the surveyors in 1858 determined to issue another call for a convention, to be convened in time so as to bring before the legislature of 1858-9 such amendments to laws in regard to surveyors and fees as might be deemed necessary. The invitations were printed at Chicago and mailed to all the County Surveyors in Illinois. This call is almost an exact copy of the first, except dates and signatures, and is as follows:

CHICAGO, Nov. 22nd, 1858.

SIR—The undersigned, Surveyors, in view of the diversity of opinion and practice among the Surveyors in the different Counties of the State as to the proper mode of dividing interior and fractional Sections, and the restoration of lost or destroyed Section and Quarter-section Corners, and deeming it expedient that a uniform practice should be adopted for such surveys, and also that there should be a revision of the tariff of fees, which being adopted at an early day, when surveying was not attended with the same difficulties as now, is therefore inapplicable at the present time; we would suggest that while the law is indefinite in many cases, the fees in others are inadequate to the amount of labor to be performed; that while it requires the surveys to be recorded, it provides no remuneration; that while it requires us to furnish plats and certificates, when called on, it makes no provision for our being paid for our trouble; and that while it requires us to survey County Roads, and furnish plats for them, the remuneration which it allows is altogether inadequate.

Believing that these objects can best be obtained, and these defects be best remedied, by consultation and agreement of the Surveyors, we would therefore suggest the propriety of MEETING IN CONVENTION on the 5th day of JANUARY, 1859, at Springfield, for the purpose of discussing these and such other matters as may come before the Convention, in order to bring the subject before the Legislature at as early a day as possible.

We would therefere request that, if the above suggestions meet with your approbation, you will attend on the occasion, if practicable, and, if unable to attend, you will please communicate your views on such matters connected with the profession as you may think appropriate to come before the Convention.

Respectfully Yours,

EDMUND BIXBY, S. S. GREELEY, A. F. BRADLEY,	Cook County:
A. J. MATHEWSON.	Will County.
CORTES FESSENDEN Z. A. ENOS. JOSEPH LEDLIE, H. A. ULFERS,	Sangamon Co.
W. F. WHITMORE,	La Salle Co.
W. L. HORR, A. G. & G. W. STEVENS, P FOLSOM, O. LARKIN, J. HALDEMAN, W. H. NEWMAN, J. W. AMES,	McLean Co.
J. L. HANCHETT,	Kane Co.
F. H. CHAPMAN, J. WARD.	Macoupin Co.
H. D. HALL,	Christian Co.
HORACE BROOKS, A. S. JANES, D. F. DEIBEAT, J. G. VALLETTA.	Du Page Co.

N. B. Please forward all communications to the County Surveyor's Office, Chicago. or Springfield.

The convention met at the time and place specified, with the addition of the following Surveyors not signing the call: M. Nelson Buck, Livingston county; A. G. Chamberlain, Pike county; James D. McPherson, M. Gordon, Brown county; A. T. Risley, Macon county; Sharon Tyndale, St. Clair county; Elijah Smith, Massac county; Thomas King and B. S. Prettyman, Tazewell county; J. R. Herring, Winnebago county; and D. A. Spaulding, Madison county. There was also a large number of communications from Surveyors who were unable to attend. In this convention were a number of men of acknowledged ability and experience as Surveyors, such as D. A. Spaulding, who had been for many years in the employment of the government, both in the field and in the Surveyor General's office at St. Louis, he having done a large amount of government surveying in this as well as other states; Sharon Tyndale, who was for a number of years connected with the Coast Survey and was subsequently, in 1864, elected Secretary of State for Illinois; Joseph Ledlie, a life-long Surveyor, who in company with Charles Manners, of Christian county, ran nearly all the principal lines of the Kansas survey; Cortes

Fessenden, who had been connected with the Burts in the public surveys of the mineral and swamp regions of Michigan, employed in the public surveys of Dakota, and finally appointed Surveyor General of that territory; and others equally competent, though perhaps not as well known.

At this convention, all the subjects that had been considered in the previous convention were again gone over. But the one of greatest interest, that occupied more time than all the rest, and upon which the surveyors appeared to be more firmly divided, was whether the recommendations given to County Surveyors by the Surveyor General for Illinois and Missouri, in his "Manual of Instructions," or those given by Judge Burt, in his "Key to the Solar Compass," were correct and should govern the surveyors in their surveys. Or, more accurately, was the Act of Congress of Feb. 11th, 1805, intended to apply to and control all future surveys and subdivisions of the government lands. After a very long and warm discussion, it was finally proposed and agreed to submit the question to some able lawyer for his decision. In the selection of the attorney, the convention chose Mr. Lincoln, on account of his being a practical surveyor as well as a recognized leading member of the bar, on the principle that a good lawyer could better interpret and apply the law to a subject with which he was thoroughly conversant. Accordingly a committee was appointed, which waited upon Mr. Lincoln and obtained from him the following written opinion, the original of which is in my possession:

The 11th Section of the Act of Congress, approved Feb. 11, 1805, prescribing rules for the subdivision of sections of land within the United States system of surveys, standing unrepealed, in my opinion, is binding on the respective purchasers of different parts of the same section, and furnishes the true rule for surveyors in establishing lines between them. That law, being in force at the time each become a purchaser, becomes a condition of the purchase.

And by that law, I think the true rule for dividing into quarters, any interior section, or section which is not fractional, is to run straight lines through the section from the opposite

quarter section corners, fixing the point where such straight lines cross, or intersect each other, as the middle, or center of the section.

Nearly, perhaps quite, all the original surveys are to some extent erroneous, and in some of the sections, quite so. In each of the latter, it is obvious that a more equitable mode of division than the above might be adopted; but as error is infinitely various, perhaps no better single rule can be prescribed.

At all events, I think the above has been prescribed by the competent authority.

A. LINCOLN.

Springfield, Jany. 6, 1859.

This opinion settled the question in the convention as to the controlling authority of the law of 1805. The convention also drafted a bill on the subject of surveying and fees, which showed more strength in the legislature than the former, yet finally shared the same fate.

Many persons seem to treat doubtingly or lightly the statement that Mr. Lincoln was a Surveyor; but those old Surveyors, such as Mr. Ledlie and others who knew him personally and have consulted with him on the subject of surveying, or have had occasion to retrace any of his work, will bear witness that he was a good practical land Surveyor.

For the benefit of those who have not had these oportunities, a fac simile copy of one of his certified plats of survey as deputy for T. M. Neale, County Surveyor of Sangamon county, is hereto attached. The Sangamon river runs through this section, and the section lines in the government survey were not extended across but closed on the river, without any connection being made between the opposite marginal corners or lines, and though shown on the government plats as being continuous straight east or west lines across the river, they were in fact surveyed by the government Surveyor as represented by Mr. Lincoln's plat.

This plat of survey is not only interesting as a memento of Mr. Lincoln, but also as showing how Illinois lands were valued at that date, as indicated by the value of the several

lots in the school section, as determined by the trustees and marked by them on each tract, and at those estimaed values the lots were then subject to purchase.

In conclusion, there is a fact connected with our too-little-honored profession of which I think we have some cause to be proud—it is, that two of the most illustrious characters in the history of the nation and of the world, were in early life practical Surveyors. And may we not, with some claim of truth, attribute much of their subsequent success in the battle of life to that training of their great natural abilities which the early practice of surveying gave. Success in surveying, necessitates close observation, intelligent investigation, judicious weighing of evidence, self-reliance, prompt decision and action. The Surveyor in the field has no opportunity to consult authorities, to counsel with others, or hold under advisement for subsequent adjudication. He must think and act for himself, and that quickly and firmly. In the discharge of his duties he combines the three-fold character of attorney, jury and judge. Of attorney, in bringing out and collecting the evidence; of jury, in determining the facts from the evidence; and of judge, in applying the law to the facts so ascertained. His will and commands move and control everything connected with the survey; in fact, he is a little dictator for the time being. This habit of commanding and being implicitly obeyed cultivates and strengthens that self-reliance, firmness of purpose and decision of action which are so essentially necessary to the accomplishment of all great and important undertakings. The constant exercise of this arbitrary power is apt to give to ordinary minds (if not carefully watched) an over-weening confidence and tenacious adherence to opinions once formed that cannot be easily changed or modified, and subjects our profession, as a class, to the criticism of being self-willed and dogmatical.

This brief account of the transactions of the Surveyors of Illinois may possibly show that while they were later in forming a permanent organization than the Surveyors in several of the other states, they were not much behind, if not the pioneers, in convening and considering the subjects for which the permanent organizations have been created.

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http://www.archive.org/details/earlysurveyorssu00enos

Wednesday, June 1, 1859.

Illustration.

Perhaps, Reader, you are the happiness, during an at
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than the better, single rule can be harmonious.
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ecution by the complete authority —
Wednesday, June 1, 1859.

The 11th Section of the act of Congress, approved Feb. 11, 1805, prescribing rules for the subdivision of Sections of land within the United States system of Surveys, standing unrepealed, in my opinion, is binding on the respective purchasers of different parts of the same Section, and furnishes the true rule for Surveyors in establishing lines between them— That law, being in force at the time each became a purchaser, becomes a condition of the purchase—

And, by that law, I think the true rule for dividing into quarters, any interior Section, or Section which is not fractional, is to run straight lines through the Section from the opposite quarter section corners, fixing the point where such straight lines cross, or intersect each other, as the middle, or center of the Section—

Nearly, perhaps quite, all the original surveys are to some extent, erroneous, and in some of the Sections, greatly so— In each of the latter, it is obvious that a more equitable mode of division than the above, might be adopted; but as error is infinitely various, perhaps no better single rule can be prescribed.

At all events I think the above has been prescribed by the competent authority—

Springfield, Jany. 6. 1859. A. Lincoln.

The 11th section of the act of Congress approved Feb. 11, 1862, provides rules for the subdivision of sections of land within the United States, by surveyors, preparing numbered, in my opinion, is binding on the respective purchasers of different parts of the same section, and furnishes the rule for determining in a satisfactory way between them. What has been done in pursuance of this provision, therefore is conclusive of the purchasers.

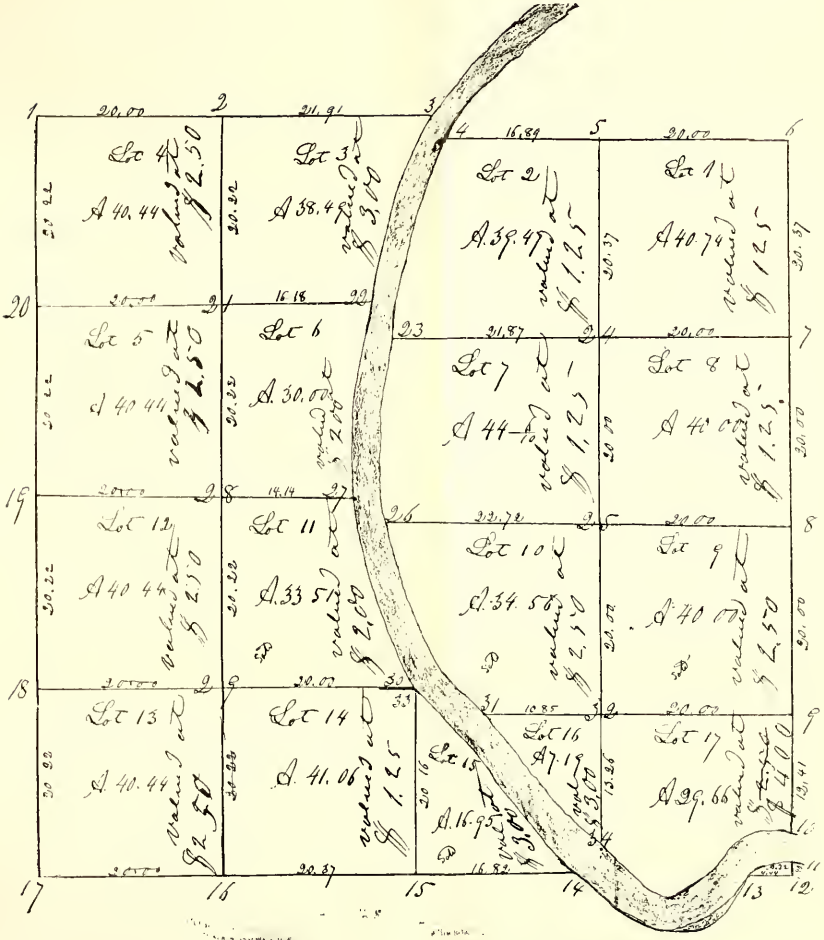
Now, by what law, I think the rule for subdividing into quarters, but without reference to the original boundaries of the section, is the rule which should govern in the present case.

FAC-SIMILE OF OPINION BY MR. LINCOLN

The 11th section of the act of Congress, approved Feb. 11, 1805, prescribing rules for the subdivision of sections of land within the United States system of surveys, stationing surveyors, in my opinion, is binding on the respective purchasers of different parts of the same section, and furnishes the true rule for surveyors in establishing lines between them. That law, being in force at the time each became a purchaser, becomes a condition of the purchase.

Thus, by that law, I think the true rule for surveying into quarters, any interior section, or section which is not fractional, is to run straight lines

FAC-SIMILE OF CERTIFIED PLAT OF SURVEY BY MR LINCOLN



I certify that the foregoing are an accurate Plat and Field Notes for Section 16 in Township 17 North of Range 6 West of the 3rd Principal Meridian; as surveyed by me

A. Lincoln
for S. M. Neale. C.S.C.

May 10th 1836

Corner No	Bearing Trees	Distance Links	Course	Distance Links	
1	W.Oak	18	N57E	132	
2	W.Oak	24	S56E	66	
3	W.Oak	12	S74E	19	
4	Elm	14	N51E	55	
5	Post & Mound				
6	Elm	16	N86E	410	
7	Post & Mound				
8	Elm	16	S84E	41	
9	Hick	6	S84E	25	
10	S.Oak	36	N3E	16	
11	Hazel	7	S50E	21	
12	Sycam	30	N36E	47	
13	Sycam	24	S30E	15	
14	Cotton	10	S6E	30	
15	W.Oak	10	N10E	37	
16	W.Oak	3	N33E	8	
17	Hick	12	S24E	35	
18	Hick	3	N6E	9	
19	B.Oak	32	S9E	79	
20	Post & Mound				
21	W.Oak	22	N88E	3	
22	Elm	14	N44E	29	
23	B.Oak	22	corner		
24	Post & Mound				
25	Ash	24	N50E	4	
26	Hick	12	corner		
27	Elm	15	corner		
28	B.Oak	12	S37E	23	
29	Post & Mound				
30	Lynn	11	N50E	20	
31	Hick	14	N50W	17	
32	Hick	8	N39W	8	
33	W.Oak	22	corner		
34	Cotton	17	S25E	7	

We certify that the foregoing is an accurate Plat and Field Notes of the Survey of Section 16 in Town 17 north of range 6 west of the 3rd principal meridian given under our hands at Springfield Illinois this 10th day of May 1836 —

Stephen Hale
Benjamin Wilson